

(c) forming an embedded interconnection slot over said first insulating film main surface,

(d) forming a connecting hole in a bottom surface of said embedded interconnection slot, and connected to a lower conducting layer,

(e) forming a conducting barrier film over surface region of the bottom surface and side surface of said embedded interconnection slot and said connecting hole,

(f) forming an embedded metal interconnection layer having copper as its main component embedded in said interconnection slot and in said connecting hole in which said conducting barrier film is formed, and

(g) forming a cap insulating film so as to cover said embedded metal interconnection layer and the upper surface of said first insulating film, wherein:

the concentration of components other than copper in said embedded metal interconnection layer in the finished semiconductor integrated circuit device does not exceed 0.8At%, and

the film thickness of the thinnest part of said conducting barrier film in the side walls of said embedded interconnection slot and said connecting hole is less than 10 nm.